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AUTHOR	Darkenwald, Gordon; Kim, Kwang; Stowe, Peter
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ABSTRACT

In the 1995 National Household Education Survey, adults were asked about six types of adult education activities: English as a second language, basic skills education, postsecondary credential programs, apprenticeships, work-related courses, and personal development courses. About 22 percent of adults reported participating in work-related courses. Among the key findings concerning participation in work-related courses were the following: college graduates (39 percent) were more than twice as likely as persons who completed only high school (18 percent) to participate in work-related courses; the youngest and oldest adults (those under 25 and over 56 years old) were less likely to participate in work-related courses (16 percent or less) than adults between 26 and 54 years old (27 percent or higher); women constituted half of the participants in work-related courses; rates of participation in work-related courses were generally higher among persons in professional or managerial occupations (from 41-71 percent) and lower among those in trades (from 11-22 percent); employed adults (31 percent) were more likely to participate in work-related courses than those who were unemployed but in the labor force (11 percent); and time (47 percent) and cost (30 percent) were the most frequently reported barriers to participation in work-related courses by interested nonparticipants. Information on the survey methodology and data reliability is included. Contains 9 endnotes, 17 references, and 6 data tables. (YLB)

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Adults' Participation in Work-Related Courses: 1994-95

Content Contact:
Peter Stowe
202-219-2099

Authors:
Gordon Darkenwald
Rutgers University

Kwang Kim
Westat

Peter Stowe
NCES

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Lifelong learning and training in new technologies are of great interest in the fields of education and labor. The Nation's position in world markets is strongly tied to the skills of its workforce. Indeed, one of the National Education Goals for the year 2000 states that "…every adult will be literate and will possess the knowledge and skills necessary to compete in a global economy…" (National Education Goals Panel 1994).

In the 1995 National Household Education Survey (NHES:95), adults were asked about six types of adult education activities: English as a Second Language (ESL), basic skills education, postsecondary (college or vocational) credential programs, apprenticeships, work-related courses, and personal development courses. One way of measuring participation is to examine the person's main reason for participation. Nearly one in three adults (31 percent) reported that they participated in one or more of these six types of educational activity for which the primary reason for participation was work-related. Based on this "main reason" definition, 40 percent of employed adults participated in work-related adult education, as did 28 percent of unemployed adults and 10 percent of those not in the labor force (not shown in tables).[1] Kopka and Peng (1994) reported that 33 percent of employed adults participated in adult education for work-related reasons in 1991. The 1995 participation rate of 40 percent for employed adults therefore represents an increase in adult education participation for work-related reasons. This finding is consistent with the increase in adult education participation overall reported by Kim et al. (1995).

This report focuses specifically on activities reported under "work-related courses," another approach to examining participation. About 22 percent of adults reported participating in such courses.[2] Survey respondents were asked if they had taken any courses related to a job or career, whether or not they had a job at the time they took the courses. Examples given were courses taken at the workplace, courses taken elsewhere that related to a job or career, or courses for a license or certification for a job. As noted above, adults were also asked about other types of adult education that are not included among these work-related courses.[3] Participation status was determined by whether or not an adult participated in one or more work-related courses in the 12 months prior to the interview.

Among the key findings concerning participation in work-related courses are the following:

- The overall participation rate in work-related courses was 22 percent in 1994-95.

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- College graduates were more than twice as likely as persons who completed only high school to participate in work-related courses during the 12 months prior to the interview (39 percent and 18 percent, respectively).

- The youngest and oldest adults (those under 25 and over 56 years old) were less likely to participate in work-related courses (16 percent or less) than adults between 26 and 54 years old (27 percent or higher).

- Women constituted half of the participants in work-related courses.

- Rates of participation in work-related courses were generally higher among persons in professional or managerial occupations (ranging from 41 percent to 71 percent) and lower among those in trades (ranging from 11 percent to 22 percent).

- Nearly half of all participants (48 percent) took work-related courses provided by business and industry. Other providers included educational institutions (elementary, secondary, and postsecondary) and professional and trade associations.

- Employed adults were more likely to participate in work-related courses than those who were unemployed but in the labor force (31 percent and 11 percent, respectively).

- Time (47 percent) and cost (30 percent) were the most frequently reported barriers to participation in work-related courses by interested nonparticipants.[4]

The NHES:95 was a random-digit-dial (RDD) telephone survey of the civilian, noninstitutionalized population of the 50 states and the District of Columbia, conducted in January through April of 1995. In the Adult Education component, the population of interest included adults age 16 and older who were not enrolled in elementary or secondary school at the time of the interview. A brief description of the study methodology is presented in the Survey Methodology and Data Reliability section of this report.

Population of Interest for Work-Related Courses

The population of interest for this report includes all adults as defined above, except those meeting all of the following three criteria: (1) retired *and* (2) over age 70 *and* (3) did not work for pay during the 12 months prior to the interview. Using this exclusion, an estimated 179 million adults composed the population of interest for this report. While not all adults included in this analysis were employed or seeking employment, they did have the potential to be labor force participants, and their participation is relevant for this reason. Readers should note that other approaches to defining the eligible population for work-related adult education have been used in other research. For example, Kopka and Peng (1994) and the U.S. Department of Labor (1991) focused exclusively on employed adults.

Characteristics of Participants in Work-Related Courses[5]

Most adults engaged in work-related courses were in the prime years of their work lives rather than near the beginning or end. As shown in table 1, participation rates were significantly lower for adults under age 25 and over age 56 than among those 26 to 55 years old. The participation rates for young and old were significantly different from those whose age fell in the middle range. These differences remained significant when other factors such as education, employment status, and occupation were held constant in a regression analysis (table 6).

Educational attainment was found to be associated with participation in work-related courses, a relationship noted consistently in the research literature (Darkenwald and Merriam 1982). Adults with a bachelor's degree or more education were almost 10 times more likely to engage in work-related courses than adults with less than a high school diploma and were about twice as likely to participate as those with a high school diploma (table 1). The difference between persons with some postsecondary education and college graduates, although statistically significant, was comparatively small. After taking other adult characteristics into account, a significant difference in participation rates between those with a bachelor's degree or more education and those with or without a high school diploma was still found (table 6).

Employment status was also related to participation in work-related courses (table 1). Employed adults participated to a greater extent than did unemployed adults and adults not in the labor force,[6] such as retirees (as previously indicated, retirees were excluded from the sample only if they also were older than 70 and had not worked in the past 12 months). Specifically, only 2 percent of retired adults who were younger than 70 years and/or worked in the previous 12 months participated in work-related courses as compared to 24 percent of nonretired adults. The significant effect of employment status remained when other characteristics were taken into account.

White, non-Hispanic adults participated at higher rates than black, non-Hispanic and Hispanic adults, and black, non-Hispanic adults participated at a higher rate than Hispanics. When characteristics other than race (e.g., age, educational attainment, occupation) were controlled for, black participation rates were not significantly different from those of whites. However, those of other races, as well as Hispanics, were significantly less likely to participate in work-related courses (table 6).

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Participation by Occupation[7]

A review of work-related course participation rates by occupation reveals a clustering of occupations into three general groups: professional or managerial occupations; service, sales, or support occupations; and trades (table 2). In general, those in professional or managerial occupations tended to have relatively high rates of participation (ranging from 41 to 71 percent), and those in the trades tended to have low rates (ranging from 11 to 22 percent). Among those in service, sales, or support occupations, the participation rates ranged from 21 to 43 percent. The association between occupation and participation remained significant when other factors such as education, age, and race/ethnicity were held constant (table 6).

Participation rates of over 50 percent were observed in several occupations (table 2). Specifically, the participation rates for the health diagnosing professions (e.g., physicians) and for health assessment and treatment personnel (e.g., nurses, physical therapists) were 67 percent and 71 percent, respectively. Among teachers other than those at the college level, about half (52 percent) reported participating in work-related courses. These professions, among others, generally have some type of requirement for continuing education in order to maintain licensure or certification, a fact that may be associated with the high participation rates.

The participation rate for executive, administrative, and managerial personnel is 42 percent, similar to that for technical and related support workers (43 percent) and other professionals such as engineers and scientists (47 percent).

As noted above, some professions have requirements for continuing education. In other cases, adults may find that participation in work-related courses increases opportunities for advancement. These statistics also suggest that the more technical, complex, and fast-changing the work technology, the greater the need for and participation in work-related continuing education.

Instructional Providers of Work-Related Courses

Adults participate in work-related courses under the auspices of many types of organizations and community agencies, and some adults took courses from more than one type of provider. About 48 percent of participants engaged in work-related courses provided by business and industry (table 3). This is not surprising when one considers that 81 percent of all business establishments provide structured or formal training for their employees (National Center on the Educational Quality of the Workforce 1994). About 15 percent of adults were engaged in work-related courses provided by professional organizations, which have grown in number as occupations proliferate and workers seek professional status (Hornbeck and Salamon 1991). Approximately 6 percent of adult participants took work-related courses from 2-year community colleges and about 12 percent from 4-year colleges and universities (not as part of a program of study leading to a degree, diploma, or certificate).

The Interested Nonparticipant

Adults who stated that they had not participated in any work-related courses in the previous 12 months were asked, "In the past 12 months, did you have an interest in taking any career or job-related courses?" An estimated 37 million adults, or one-fourth of all nonparticipants, replied in the affirmative (table 4). Thus, the total interest in work-related courses may be nearly twice the current level of participation (37 million interested nonparticipants plus 40 million participants).

Age is inversely associated with interest in work-related courses. About 33 to 36 percent of adults age 45 and younger were interested in such courses. The proportion interested declined to 24 percent for the 46 to 55 age category and to 8 percent among those age 56 and older.

Educational attainment was positively associated with interest in work-related courses, as it was with participation. Only about 16 percent of high school noncompleters expressed interest in participating, compared to 33 percent of college graduates.[8] Not surprisingly, those adults not in the labor force were far less likely than adults who were either employed or unemployed but in the labor force to express interest in work-related courses. Nonparticipants who were unemployed (44 percent) were more likely to express interest in work-related courses than those currently employed (32 percent).

When asked if they were aware of available courses, 38 percent of the interested nonparticipants indicated that they were not (table 5).

Barriers to Participation[9]

Nonparticipants who reported that they were interested in work-related courses and did know of available courses were queried about barriers to participation. Time and cost were identified as the most important barrier by 47 percent and 30 percent of adults, respectively (table 5). Only 7 percent cited child care as the main barrier; and 3 percent cited transportation problems. In studies of barriers to participation in the adult education literature, time and cost also figure prominently. Other barriers noted in this literature include lack of self-confidence, fear of being "too old," and personal problems other than child care, such as illness or disability (Darkenwald and Valentine 1985).

Survey Methodology and Data Reliability

The 1995 National Household Education Survey is a telephone survey conducted by the U.S. Department of Education's National Center for Education Statistics (NCES). Data collection took place from January through April of 1995. The sample is

nationally representative of all civilian, noninstitutionalized persons in the 50 states and the District of Columbia. The sample was selected using random-digit-dialing (RDD) methods and included persons living in households with telephones. The data were collected using computer-assisted telephone interviewing (CATI) technology. This section provides a brief description of the study methodology; further details appear in the *National Household Education Survey of 1995: Adult Education Data File User's Manual* (Collins et al. 1996).

The Adult Education component of the NHES:95, which is the basis of this report, sampled civilian adults who were age 16 and older and not enrolled in elementary or secondary school at the time of the interview. A set of screening questions was administered to an adult member of the household to collect the information required for sampling household members for interviews. Adults who did not receive a high school diploma or its equivalent and adults who had participated in an educational activity in the previous 12 months were sampled at higher rates than other adults. In general, one adult was selected per household. However, up to two adults were eligible to be sampled in households in which any adult was classified as an adult education participant without a high school diploma or its equivalent. Weighting procedures were used to adjust for differences in probabilities of selection.

In the adult education interview, information was collected about educational attainment, participation in a wide range of education activities in the previous 12 months, and labor force participation. The only person who could respond to the adult education interview was the sampled adult him/herself; multiple attempts were made to complete interviews with persons not available at the time of selection. Interviews were conducted in both English and Spanish. A total of 19,722 adult education interviews were completed in the NHES:95.

While this report focuses on the participation of adults in work-related courses and barriers to that participation, other NHES:95 data cover specifics of participation in five additional types of adult education activities–English as a Second Language, basic skills education, credential programs, apprenticeships, and personal development courses–including the role of employers as providers and sponsors of educational activities and the reasons adults participate.

Logistic Regression Analysis. The variables presented in tables 1 and 2 were subjected to a logistic regression analysis in order to identify whether the adult characteristics were each significantly related to participation in work-related courses when other variables of interest were included in the model. The procedure used for this analysis (and all analyses in this report) was WesVarPC, which is a software program using a replication method to take into account complex sample designs. A main effects model was used for this procedure.

The regression analysis included the following variables: age, educational attainment, labor force status, sex, race/ethnicity, and occupation. The excluded group (i.e., the group assigned to the intercept term) for each variable is the group found to have the highest rate of participation in work-related courses in the bivariate analysis. As a result, each of the parameter estimates is negative, indicating that the represented group was less likely to participate than the excluded group, and the intercept is positive. The results of the regression analysis, parameter estimates and their *t* values, are presented in table 6.

In logistic regression models, some researchers evaluate the fit of the model by using a statistic that indicates how much the set of predictor variables influences the goodness-of-fit Chi-squared statistic. One such measure is R^2_{LA}, which is almost equal to the proportional reduction in the Chi-squared statistic or the log-likelihood due to the inclusion of the predictor variables. It would be exactly equal to this reduction

except for some adjustments for the number of predictor variables in the model. Thus, a value near zero indicates the predictor variables have little impact on the value of the log-likelihood and a value near one suggests the predictors have a large impact.

R^2_{LA} is somewhat analagous to the ordinary R^2 statistic for linear regression models; however, in linear models the R^2 measures the exact reduction in variance due to the predictor variables. No such measure exists for logistic models. More information on the interpretation of R^2_{LA} is given by Menard (1995). The value of R^2_{LA} for the model presented in table 6 is 0.182.

Data Reliability. Estimates produced using data from the NHES:95 are subject to two types of error, sampling errors and nonsampling errors. Nonsampling errors are errors made in the collection and processing of data. Sampling errors occur because the data are collected from a sample rather than a census of the population.

Nonsampling Errors. Nonsampling error is the term used to describe variations in the estimates that may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, the differences in respondents' interpretations of the meaning of the questions, response differences related to the particular time the survey was conducted, and mistakes in data preparation.

In general, it is difficult to identify and estimate either the amount of nonsampling error or the bias caused by this error. This is particularly problematic in random-digit-dialing (RDD) surveys because so little is known about the sampled telephone numbers and households (Groves et al. 1988). Since nonresponse is an important source of nonsampling error in the NHES:95, an NCES Working Paper (Brick and Broene 1997) was prepared to address this issue. The nonresponse bias analysis uncovered no large response biases; however, as noted, the bias analysis was limited because so little is know about nonresponding households.

In the NHES:95, efforts were made to prevent nonsampling errors from occurring and to compensate for them where possible. For instance, during the survey design phase, focus groups and cognitive laboratory interviews were conducted for the purpose of assessing respondent knowledge of the topics, comprehension of questions and terms, and the sensitivity of items. For a discussion of the use of cognitive laboratory research in the NHES in general, see Nolin and Chandler (1996). The design phase also included a multiphase field test in which about 550 adult education interviews were conducted.

An important source of nonsampling error for a telephone survey is the failure to include persons who do not live in households with telephones. About 95 percent of all adults age 16 and older live in households with telephones. Noncoverage is associated with socioeconomic status, because persons with lower education or lower income levels are more likely to live in nontelephone households. Estimation procedures were used to help reduce the bias in the estimates associated with excluding the 5 percent of adults who do not live in telephone households. See Brick (1996) for additional information on population coverage and adjustment procedures.

Response Rates. In the NHES:95, a set of screening questions to identify and sample household members (Screener) was completed with 45,465 households, with a response rate of 73.3 percent. Of the 23,969 adults sampled for the Adult Education component, 80 percent (19,722) completed the interview. Thus, the overall response rate for the adult education interview is 58.6 percent (the product of the Screener response rate and the adult education interview completion rate). As noted above, nonresponse analysis conducted for the NHES:95 uncovered no large biases, but the nonresponse analysis is limited by the fact that little is known about nonresponding households in RDD surveys.

For the adult education interview, item nonresponse (the failure to complete some items in an otherwise completed interview) was very low for most items. The item response rates for all variables in this report are higher than 94 percent; most are over 98 percent.

Sampling Errors. The sample of telephone households selected for the NHES:95 is just one of many possible samples that could have been selected. Estimates produced from the NHES:95 sample may differ from estimates that would have been produced from other samples. This type of variability is called sampling error because it arises from using a sample of households with telephones rather than all households withtelephones

The standard error is a measure of the variability due to sampling when estimating a statistic; standard errors for estimates presented in this report were computed using a jackknife replication method. Standard errors can be used as a measure of the precision expected from a particular sample. The probability that a population parameter obtained from a complete census count would differ from the sample estimate by less than 1 standard error is about 68 percent. The chance that the difference would be less than 1.65 standard errors is about 90 percent; and that the difference would be less than 1.96 standard errors, about 95 percent.

Standard errors for all of the estimates are presented in the tables. These standard errors can be used to produce confidence intervals. For example, an estimated 22 percent of adults participated in work-related courses in the previous 12 months, and this figure has an estimated standard error of 0.4. Therefore, the estimated 95 percent confidence interval for this statistic is approximately 21.2 to 22.8 percent (22 ± 1.96 (.4)). That is, in 95 out of 100 samples from the same population, the population parameter should fall within this confidence interval.

The tests of significance used in this analysis are based on Chi-squared tests for bivariate relationships and Student's *t* statistics for the comparison of individual estimates. The Rao-Scott Chi-squared test was used to take into account the complex sample design. As the number of comparisons at the same significance level increases, it becomes more likely that at least one of the estimated differences will be significant merely by chance, that is, it will be erroneously identified as different from zero. As the number of comparisons increases, the chance of making this type of error also increases. A Bonferroni adjustment was used to correct Student's *t* tests for multiple comparisons. This method adjusts the significance level for the total number of comparisons made with a particular classification variable. All the differences cited in this report are significant at the 0.05 level of significance after a Bonferroni adjustment.

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Endnotes

[1] The standard errors of the cited estimates are as follows: 31 percent overall work-related participation, standard error=0.35; 40 percent participation among employed persons, standard error=0.46; 28 percent participation among unemployed persons, standard error = 1.42; 10 percent participation among persons not in the labor force, standard error=0.36.[2] A slightly lower participation rate (21 percent) for work-related courses was reported in a previous Statistics in Brief (Kim et al. 1995) due to different criteria for the population of interest used in the reports. Specifically, the report on overall participation included retired adults over age 70 who had not worked for pay or profit in the previous 12 months; those adults are excluded from this report.

[2] A slightly lower participation rate (21 percent) for work-related courses was reported in a previous Statistics in Brief (Kim et al. 1995) due to different criteria for the population of interest used in the reports. Specifically, the report on overall participation included retired adults over age 70 who had not worked for pay or profit in the previous 12 months; those adults are excluded from this report.

[3] In the Adult Education interview, respondents were asked about six types of educational activities in the following order: English as a Second Language (ESL) classes, basic skills education or GED preparation classes, credential programs, apprenticeship programs, work-related courses, and personal development courses. Because respondents could not know the types of activities that would be addressed in later sections of the interview, they may have reported activities in the first section of the interview in which they appeared to fit (known as an order effect). This report is based on educational activities that the respondents reported in the career- or job-related section of the NHES:95 Adult Education interview.

[4] Two studies, a reinterview study and a response bias study were undertaken as part of a set of activities to assess data quality in the NHES:95. The analyses of these studies identified some of the barriers items as having relatively high response variability and response bias. While the sample sizes for these data quality studies were small, the findings suggest that the responses to the barriers items may not be very reliable. Readers who are interested in additional information on the reinterview study and the bias study may wish to review two NCES Working Papers: *The 1995 National Household Education Survey: Reinterview Results for the Adult Education Component* (Brick, Wernimont, and Montes 1996) and *Estimation of Response Bias in the NHES:95 Adult Education Survey* (Brick et al. 1996).

[5] To determine what personal characteristics are associated with participation in work-related courses, a logistic regression analysis was conducted with age, sex, race/ethnicity, educational attainment, occupation, and labor force status as the independent variables. These variables were selected on the basis of theory and prior research (Anderson and Darkenwald 1979). The results of the logistic regression are shown in table 6.

[6] Adults who are not in the labor force are those who did not work in the previous week and were not actively looking for work. Adults who are unemployed but in the labor force are those who did not work in the previous week but were actively looking for work.

[7] In the NHES:95, up to five jobs were reported by the respondents who worked for pay or income in the past 12 months. For each job, information regarding job titles, important duties, employer names, and types of industry was collected in order to assign industry and occupation codes for each reported job. In this report, the first reported job was used for classifying respondents' occupation.

[8] This text and table 4 present bivariate relationships between adult characteristics and interest in participation. A multivariate (e.g., regression) analysis might show that some of these characteristics are not significantly related to interest in participation when other characteristics are taken into account.

[9] See endnote 4.

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Table 1.—Number of adults in population and number and percent of participants in work-related courses,[1] by adult characteristics

Adult characteristic	Adult population[2]		Participants			
	Number (x 1,000)	s.e. (x 1,000)	Number (x 1,000)	s.e. (x 1,000)	Percent	s.e.
Total	178,618	496	39,655	693	22	.4
Age						
16 to 25 years	26,265	396	4,117	200	16	.8
26 to 35 years	40,885	572	10,862	407	27	.9
36 to 45 years	41,638	544	12,796	349	31	.7
46 to 55 years	30,684	969	8,636	329	28	.9
56 years and older	39,146	567	3,244	177	8	.4
Race/Ethnicity						
White, non-Hispanic	135,048	566	32,959	641	24	.5
Black, non-Hispanic	19,996	149	3,371	162	17	.8
Hispanic	15,504	82	1,851	107	12	.7
Other races, non-Hispanic	8,069	323	1,474	123	18	1.4
Educational attainment						
Less than a high school diploma or its equivalent	26,201	675	1,057	114	4	.4
High school diploma or its equivalent	97,871	853	17,778	418	18	.4
Some college, associate's degree, or vocational/technical school	9,745	369	3,202	179	33	1.5
Bachelor's degree or higher	44,801	581	17,617	504	39	1.0
Sex						
Male	85,121	325	19,621	486	23	.6
Female	93,497	369	20,034	470	21	.5
Labor force status[3]						
Employed, in labor force	117,833	792	36,622	651	31	.5
Unemployed, in labor force	8,167	361	906	104	11	1.2
Not in labor force	52,618	699	2,127	125	4	.2
Worked in the past 12 months						
Yes	132,473	778	38,595	672	29	.5
No	46,145	651	1,061	88	2	.2
Retired						
Yes	11,745	485	271	49	2	.4
No	166,873	636	39,384	680	24	.4

[1]Includes courses taken at the workplace, courses taken elsewhere that are related to a job or career, and courses taken for licensure or certification. Does not include basic skills/GED, ESL, postsecondary credential programs, apprenticeships, or personal development courses.

[2]Includes persons in the civilian, noninstitutionalized population in the United States, age 16 or older, and not enrolled in elementary or secondary school at the time of the interview. Excludes persons meeting all of the following criteria: (1) retired and (2) age is over 70 and (3) did not work for pay in the past 12 months.

[3]Indicates labor force status during the week prior to the interview. A derived variable, AELABOR, was used.

Note: s.e. is standard error. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Table 2.—Number of adults in population and number and percent of participants in work-related courses,[1] by occupational group

Occupational Group[2]	Adult population[3]		Participants			
	Number (x 1,000)	s.e. (x 1,000)	Number (x 1,000)	s.e. (x 1,000)	Percent	s.e.
Total	178,618	496	39,655	693	22	.4
Professional or managerial						
Health assessment, treatment	2,337	151	1,667	119	71	3.0
Health diagnosing	859	89	576	74	67	5.8
Teachers, except college teachers	5,414	237	2,837	171	52	2.2
Other professional (e.g., engineers, scientists, social scientists)	7,903	308	3,739	183	47	2.2
Executive, administrative, and managerial	13,098	395	5,509	253	42	1.5
College teachers	1,254	114	511	61	41	4.3
Service, sales, or support						
Technical and related support	5,240	257	2,268	175	43	2.1
Miscellaneous occupations	2,311	170	819	81	35	3.0
Administrative support, including clerical	22,968	472	6,646	295	29	1.1
Sales workers	18,179	454	4,214	227	23	1.2
Service	20,080	585	4,192	206	21	1.1
Trades						
Precision production, craft and repair	12,667	386	2,811	193	22	1.3
Transportation and materials moving	5,311	297	825	90	16	1.6
Machine operators, assemblers, and inspectors	9,484	429	1,392	108	15	1.0
Agriculture, forestry, and fishing	2,336	223	270	52	12	2.3
Handlers, equipment cleaning, helpers, and laborers	2,456	176	273	68	11	2.8
No job in the past 12 months[4]	46,720	657	1,107	90	2	.2

[1]Includes courses taken at the workplace, courses taken elsewhere that are related to a job or career, and courses taken for licensure or certification. Does not include basic skills/GED, ESL, postsecondary credential programs, apprenticeships, or personal development courses.

[2]Occupations were coded using a collapsed version of the Standard Occupational Codes of the Bureau of Labor Statistics.

[3]Includes persons in the civilian, noninstitutionalized population in the United States, age 16 or older, and not enrolled in elementary or secondary school at the time of the interview. Excludes persons meeting all of the following criteria: (1) retired and (2) age is over 70 and (3) did not work for pay in the past 12 months.

[4]Includes unemployed persons and persons not in the labor force, such as retirees, homemakers, etc.

Note: s.e. is standard error. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Table 3.—Number and percent of participants in work-related courses,[1] by instructional provider

Instructional provider	Participants[2]			
	Number[3] (x 1,000)	s.e. (x 1,000)	Percent[4]	s.e.
Total	39,655	693	100	--
Public school	1,705	142	4	.3
Two-year community or junior college	2,504	148	6	.3
Public 2-year vocational or technical school	938	82	2	.2
Four-year college or university	4,912	236	12	.5
Private vocational, trade, business, hospital, or flight school	3,959	215	10	.5
Business or industry	19,061	513	48	.9
Professional organization	6,136	216	15	.5
Other organization[5]	10,358	266	26	.7

[1]Includes courses taken at the workplace, courses taken elsewhere that are related to a job or career, and courses taken for licensure or certification. Does not include basic skills/GED, ESL, postsecondary credential programs, apprenticeships, or personal development courses.

[2]Includes persons in the civilian, noninstitutionalized population in the United States, age 16 or older, and not enrolled in elementary or secondary school at the time of the interview, who participated in work-related courses. Excludes persons meeting all of the following criteria: (1) retired and (2) age is over 70 and (3) did not work for pay in the past 12 months.

[3]The sum of numbers exceeds the total due to duplicated counting of the participants who took work-related courses from more than one type of provider in the 12-month period prior to the interview.

[4]The sum of percents exceeds 100 percent due to duplicated counting of the participants who took work-related courses from more than one type of provider in the 12-month period prior to the interview.

[5]Other organization includes an adult learning center, a federal, state, or local government agency, a public library, a church or religious organization, a tutor or private instructor, and some other organization.

Note: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

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Table 4.—Number of nonparticipating adults and number and percent of nonparticipating adults with an interest in work-related courses, by adult characteristics

Adult characteristic	Nonparticipants[1]		Interested nonparticipants			
	Number (x 1,000)	s.e. (x 1,000)	Number (x 1,000)	s.e. (x 1,000)	Percent	s.e.
Total	138,963	836	36,663	806	26	.5
Age						
16 to 25 years	22,147	411	8,042	322	36	1.2
26 to 35 years	30,023	570	10,746	375	36	1.0
36 to 45 years	28,842	436	9,650	396	33	1.2
46 to 55 years	22,048	832	5,308	295	24	1.3
56 years and older	35,903	520	2,918	320	8	.9
Race/ethnicity						
White, non-Hispanic	102,090	822	25,275	736	25	.7
Black, non-Hispanic	16,625	234	5,126	315	31	1.7
Hispanic	13,653	126	4,311	191	32	1.3
Other races, non-Hispanic	6,596	293	1,952	153	30	2.1
Educational attainment						
Less than a high school diploma or its equivalent	25,144	671	3,960	308	16	1.1
High school diploma or its equivalent	80,093	900	21,446	605	27	.7
Some college, associate's degree, or voc/technical school	6,542	294	2,418	146	37	1.9
Bachelor's degree or higher	27,184	547	8,839	380	33	1.2
Labor force status[2]						
Employed, in the labor force	81,212	880	25,913	620	32	.7
Unemployed, in the labor force	7,260	334	3,176	200	44	2.1
Not in the labor force	50,491	697	7,575	376	15	.7
Sex						
Male	65,500	574	17,444	533	27	.8
Female	73,463	575	19,220	576	26	.7

[1]Includes persons in the civilian, noninstitutionalized population in the United States, age 16 or older, not enrolled in elementary or secondary school at the time of the interview, and who did not participate in any work-related courses during the 12-month period prior to the interview. Excludes persons meeting all of the following criteria: (1) retired and (2) age is over 70 and (3) did not work for pay in the past 12 months.

[2]Indicates labor force status during the week prior to the interview. A derived variable, AELABOR, was used.

Note: s.e. is standard error. Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

Table 5.—Number and percent of interested nonparticipants who knew of available courses and who reported the main barrier to participating in work-related courses

Adult characteristic	Nonparticipants[1]			
	Number (x 1,000)	s.e. (x 1,000)	Percent	s.e.
Total	36,663	806	100	--
Knew of available work-related courses				
Yes	22,715	578	62	1.3
No	13,948	656	38	1.3
Primary barriers[2]				
Time	10,327	418	47	1.3
Money or cost	6,578	305	30	1.3
Child care	1,616	149	7	.6
Transportation	736	132	3	.6
Other barrier	2,787	237	13	1.0

[1]Includes persons in the civilian, noninstitutionalized population in the United States, age 16 or older, and not enrolled in elementary or secondary school at the time of the interview. Includes those adults who did not participate in any work-related courses during the 12-month period prior to the interview and who reported that they were interested in participating in work-related courses. Excludes persons meeting all of the following criteria: (1) retired and (2) age is over 70 and (3) did not work for pay in the past 12 months.

[2]Questions about primary barriers to participation in work-related courses were asked of nonparticipating adults who reported that they were interested in work-related courses and knew of any work-related courses they could have taken and that at least one of the primary barriers (i.e., time, money or cost, child care, or transportation, and other barrier) was a major or minor obstacle. Of the 22,715 interested nonparticipants who knew of available work-related courses, 22,044 reported a primary barrier as a major or minor obstacle.

Note: s.e. is standard error.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.

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Table 6.—Logistic regression analyses[1] of adult characteristics and participation in work-related courses

Adult Characteristic	Model statistics	
	Estimated Coefficient	Student's *t*
Intercept[2]	.37	7.21*
Age		
16 to 25 years old	-.61	-8.44*
26 to 35 years old	-.11	-1.96
46 to 55 years old	-.06	-1.21
56 years and older	-.76	-9.58*
Race/Ethnicity		
Black, non-Hispanic	-.18	-2.41
Hispanic	-.42	-5.24*
Other races, non-Hispanic	-.39	-4.16*
Education attainment		
Less than a high school diploma	-1.64	-12.57*
High school diploma or GED	-.61	-10.24*
Some college, associate's degree, or vocational/technical degree	-.12	-1.58
Sex		
Male	-.16	-3.50*
Labor force status		
Unemployed, in labor force	-.43	-3.03*
Not in labor force	-.88	-8.58*
Occupation		
Service, sales, or support	-.45	-7.63*
Trades	-.78	-8.80*
Not employed in last 12 months	-2.08	-13.81*

*$p < .05$; p values have been adjusted for multiple comparisons.

$R^2_{LA} = 0.182$

[1] The following variables from the NHES:95 AE data file were included in the logistic regression analysis: AGE, SEX, HIGHEDUC, RACEETHN, FSOC1, and AELABOR.

[2] The following values were put into the intercept term: 36 to 45 years old; white, non-Hispanic; bachelor's degree or higher; female; employed, in the labor force; and professional or managerial occupation.

SOURCE: U.S. Department of Education, National Center for Education Statistics, National Household Education Survey (NHES), spring 1995.